

Claims Listing

1. (Currently amended) A DNA construct for expression of multiple gene products in a cell comprising:

- (a) a single promoter at the 5' end of the construct,
- (b) multiple genes, or exteins, encoding one or more proteins,
- (c) ~~modified~~ one or more intein sequences, ~~modified by fusing~~ fused to the

carboxy-terminus portion of each gene except the last gene to be expressed, and

- (d) transcription termination sequences,

wherein at least one of the intein sequences can catalyze excision of the exteins,

and wherein the excised exteins are not ligated.

2. (Original) The construct of claim 1 for expression in a eucaryotic cell wherein the transcription termination sequences comprises a polyadenylation signal at the 3' end of the construct.

3. to 5. (Cancelled)

6. (Original) The construct of claim 1 wherein the promoter is selected from the group consisting of inducible promoters, constitutive promoters and tissue specific promoters.

7. (Original) The construct of claim 1 wherein the genes encoding one or more proteins are preceded or followed by a sequence encoding a peptide that targets the gene expression product to a particular compartment within the cell in which the construct is expressed.

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8. (Original) The construct of claim 1 wherein the proteins are different enzymes.
9. (Original) The construct of claim 1 wherein the proteins are the same proteins.
10. (Original) The construct of claim 1 wherein the inteins prevent the ligation reactions normally associated with protein splicing.
11. (Previously presented) The DNA construct of claim 10 wherein the DNA construct encodes a glycine or alanine linking the intein and extein amino acid sequences.
12. (Currently amended) The construct of claim ~~[[4]]~~ 29 wherein the proteins are selected from the group consisting of acyl CoA dehydrogenases, acyl CoA oxidases, catalases, alpha subunits of beta-oxidation, beta subunits of beta-oxidation, PHA synthases with medium chain length substrate specificity, beta-ketothiolases, NADH or NADPH dependent reductases, PHA synthases with short chain length specificity, and PHA synthases that incorporate both short and medium chain length substrates.
13. (Currently amended) The construct of claim ~~[[4]]~~ 29 wherein the proteins are selected from the group consisting of enzymes encoded by the phaG locus, medium chain length synthases, beta-ketothiolases, NADH or NADPH dependent reductases, and PHA synthases that incorporate both short and medium chain length substrates.
14. (Currently amended) The construct of claim ~~[[4]]~~ 29 wherein the proteins are selected from the group consisting of herbicide resistance, insect resistance, and desirable plant crop traits.

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15. (Currently amended) A method for expressing multiple genes in cells comprising transforming the cells with a DNA construct comprising:

- a) a single promoter at the 5' end of the construct,
- b) multiple genes, or exteins, encoding one or more proteins,
- c) ~~modified~~ one or more intein sequences, ~~modified by fusing~~ fused to the

carboxy-terminus portion of each gene except the last gene to be expressed, and

- (d) transcription termination sequences,

wherein at least one of the intein sequences can catalyze excision of the exteins, and wherein the excised exteins are not ligated.

16. (Previously presented) The method of claim 15 for expression in a eukaryotic cell wherein the transcription termination sequences comprises a polyadenylation signal at the 3' end of the construct.

17. (Cancelled)

18. (Original) The method of claim 15 wherein the cell is a plant cell and the promoter is a promoter operable in a plant cell.

19. (Cancelled)

20. (Original) The method of claim 15 wherein the promoter is selected from the group consisting of inducible promoters, constitutive promoters and tissue specific promoters.

21. (Original) The method of claim 15 wherein the genes encoding one or more proteins are preceded or followed by a sequence encoding a peptide that targets the gene

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expression product to a particular compartment within the cell in which the construct is expressed.

22. (Original) The method of claim 15 wherein the proteins are different enzymes.

23. (Original) The method of claim 15 wherein the proteins are the same proteins.

24. (Original) The method of claim 15 wherein the inteins prevent the ligation reactions normally associated with protein splicing.

25. (Previously presented) The method of claim 24 wherein the DNA construct encodes a glycine or alanine linking the intein and extein amino acid sequences.

26. (Previously presented) The method of claim 18 for making polyhydroxyalkanoates in plants wherein the proteins are selected from the group consisting of acyl CoA dehydrogenases, acyl CoA oxidases, catalases, alpha subunits of beta-oxidation, beta subunits of beta-oxidation, PHA synthases with medium chain length substrate specificity, beta-ketothiolases, NADH or NADPH dependent reductases, PHA synthases with short chain length specificity, and PHA synthases that incorporate both short and medium chain length substrates.

27. (Original) The method of claim 18 for making polyhydroxyalkanoates in plants wherein the proteins are selected from the group consisting of enzymes encoded by the phaG locus, medium chain length synthases, beta-ketothiolases, NADH or NADPH dependent reductases, and PHA synthases that incorporate both short and medium chain length substrates.

28. (Original) The construct of claim 18 wherein the proteins are selected from the group consisting of herbicide resistance, insect resistance, and desirable plant crop traits.

U.S.S.N. 09/779,957

Filed: February 9, 2001

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29. (New) The construct of claim 1 wherein the promoter is a promoter operable in a plant cell.